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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/553,103	11/14/2005	Jacobus Henricus Diederer	903-153 PCT/US	2411
23869 7590 12/20/2007 HOFFMANN & BARON, LLP 6900 JERICO TURNPIKE SYOSSET, NY 11791			EXAMINER ZIMMERMANN, JOHN P	
			ART UNIT 2861	PAPER NUMBER
			MAIL DATE 12/20/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/553,103	Applicant(s) DIEDEREN, JACOBUS HENRICUS	
	Examiner John P. Zimmermann	Art Unit 2861	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>13 October 2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d).

Information Disclosure Statement

2. The single U.S. reference listed on the submitted IDS Form PTO-1449 incorrectly listed the reference as "4,432,055" instead of "4,432,005." Examiner noticed the correct listing in the International Search Report filed with the application and corrected the listing accordingly. The correct reference has been considered by the Examiner and has been appropriately initialed as such. No further correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 1, 8, & 10-17** are rejected under 35 U.S.C. 102(b) as being clearly anticipated by **Mochizuki**, (US 6,267,474 B1).

- a. As related to independent **claim 1**, Mochizuki teaches a printing device for printing a substrate with a printing medium using the "drop-on-demand" principle [i.e. ink-jet recording device], comprising a print head, which is arranged in such a manner

that it can be moved to and fro substantially transversely with respect to the direction in which the substrate to be printed is conveyed and has at least one spray nozzle [i.e. recording head] with an interacting piezoelectric element for generating and releasing a drop of the printing medium on demand (Mochizuki – Title; Abstract; Summary, Column 2, Lines 2-4; Description, Column 2, Lines 40-44; Figure 1, Reference #3 and Figure 2, Reference #3, #4, & #5, both shown below).

FIG. 1

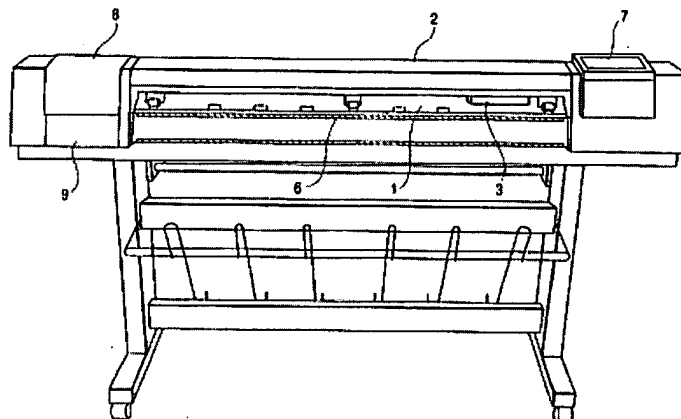
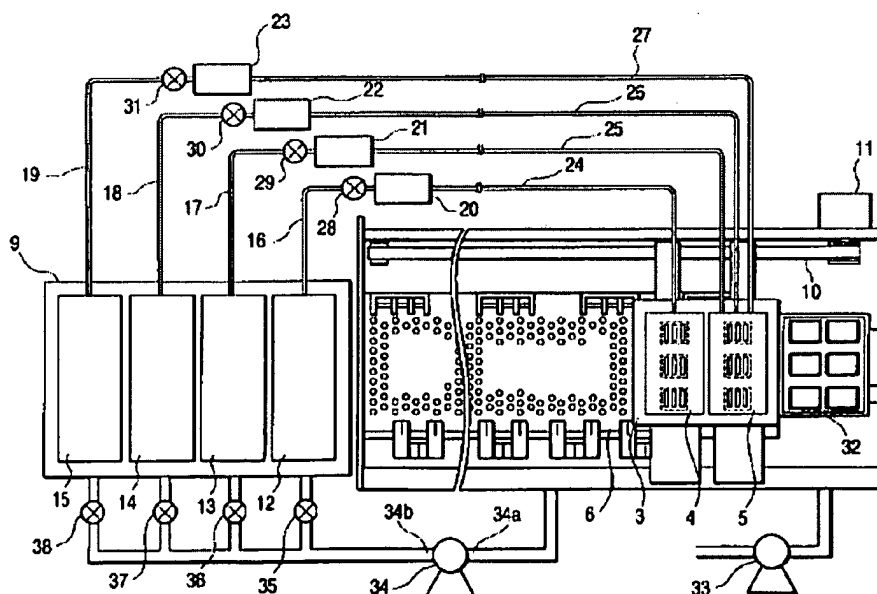
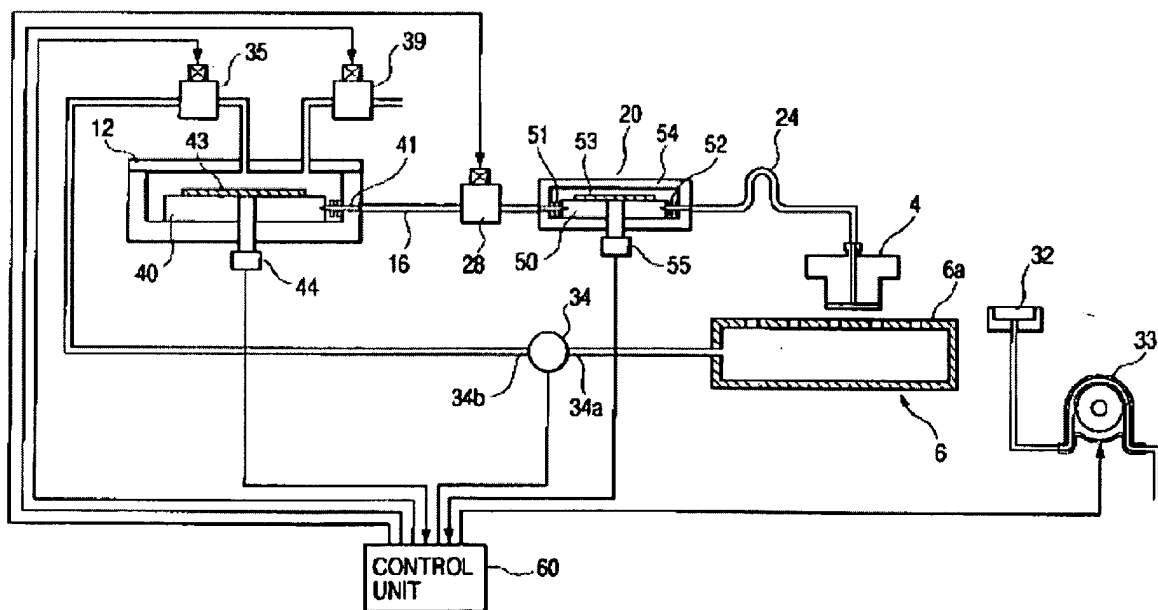


FIG. 2

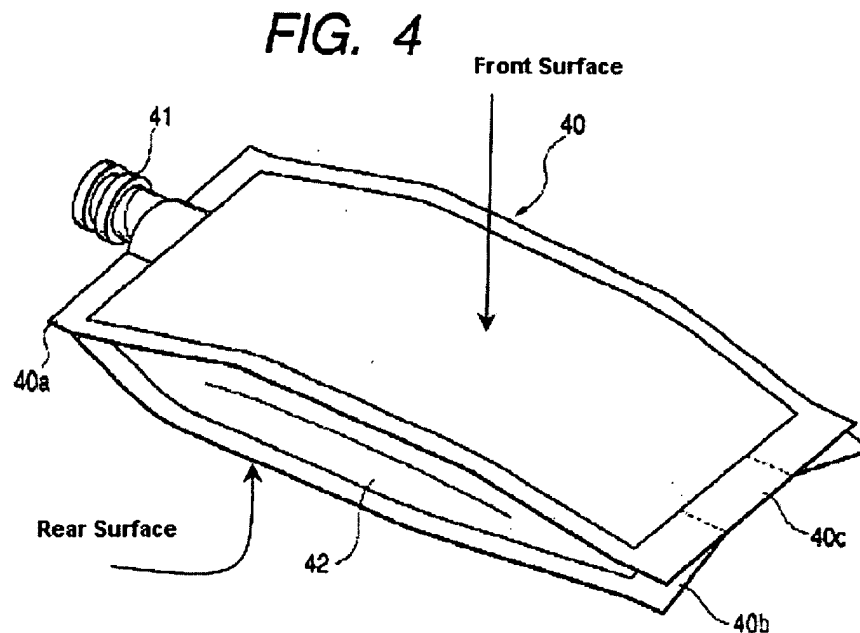


b. Continuing with **claim 1**, Mochizuki teaches the spray nozzle of the print head being in communication with a flexible working container [i.e. bag], which is arranged at a fixed position, for degassed printing medium at a working height with respect to the spray nozzle which working height lies within a predetermined height range, in order to keep the pressure of the printing medium within a predetermined pressure range, wherein the working container is in communication with a releasable flexible reservoir [i.e. ink bag] for degassed printing medium (Mochizuki – Description, Column 2, Lines 59-65 and Figure 3, Reference #4, #50, & #40, shown below).

FIG. 3



c. As related to dependent **claim 8**, Mochizuki teaches the flexible reservoir is made from a metallized plastic film [i.e. aluminum laminated film] which is impervious to gas (Mochizuki – Description, Column 3, Lines 16-25 and Figure 4, Reference #40, shown below).



- d. As related to dependent **claim 10**, Mochizuki teaches the reservoir has a front surface and a rear surface, which are connected to one another along the periphery, an outlet opening with connecting means for coupling to the working container being provided in a peripheral part (Mochizuki – Figure 4, Reference Arrows, #40a, & #41, shown above).
- e. As related to further dependent **claim 11**, Mochizuki teaches the peripheral part is shaped in such a manner that the inner wall of the reservoir has a gradual transition [i.e. gusset] in the direction of the outlet opening (Mochizuki – Description, Column 3, Lines 34-36 and Figure 4, Reference Arrows, #40a, & #41, shown above).
- f. As related to further dependent **claim 12**, Mochizuki teaches front surface of the reservoir has a length and a width, wherein the ratio of the length of the front surface of the reservoir to its width is greater than 2.5 (Mochizuki – Figure 4, Reference Arrows, shown above).

- g. As related to dependent **claim 13**, Mochizuki teaches the flexible reservoir, filled with degassed printing medium [i.e. ink], intended for a printing, the reservoir comprises a front surface and a rear surface made from a gas-impervious, metallized plastic film (Mochizuki – Description, Column 3, Lines 16-25 and Figure 4, Reference #40 & Arrows, shown above), which are connected to one another along the periphery, a closable outlet opening with connecting means for coupling to a working container being provided in a peripheral part (Mochizuki – Figure 4, Reference Arrows, #40a, & #41, shown above).
- h. As related to further dependent **claim 14**, Mochizuki teaches front surface of the reservoir has a length and a width, wherein the ratio of the length of the front surface of the reservoir to its width is greater than 2.5 (Mochizuki – Figure 4, Reference Arrows, shown above).
- i. As related to further dependent **claim 15**, Mochizuki teaches the peripheral part of the reservoir is shaped in such a manner that the inner wall of the reservoir has a gradual transition [i.e. gusset] in the direction of the outlet opening (Mochizuki – Description, Column 3, Lines 34-36 and Figure 4, Reference Arrows, #40a, & #41, shown above).
- j. As related to dependent **claim 16**, Mochizuki teaches the working container for degassed ink, intended for use for a printing device according to claim 1, comprising a flexible container made from a metallized plastic film [i.e. aluminum laminated film], a first peripheral part of which is provided with an outlet opening with connecting means for coupling to a feed leading to a print head, and a second peripheral part of which is provided with an inlet opening with connecting means for coupling to a reservoir

(Mochizuki – Description, Column 3, Line 54 – Column 4, Line 13 and Figures 3 and 5,
Reference #50, #51, & #52, both shown below).

FIG. 3

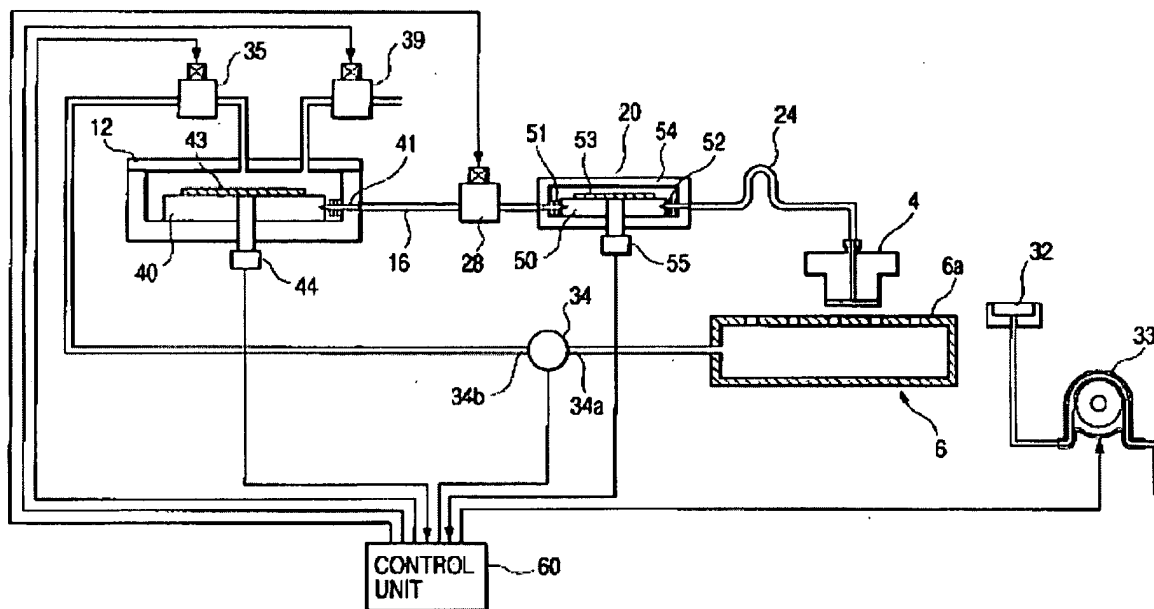
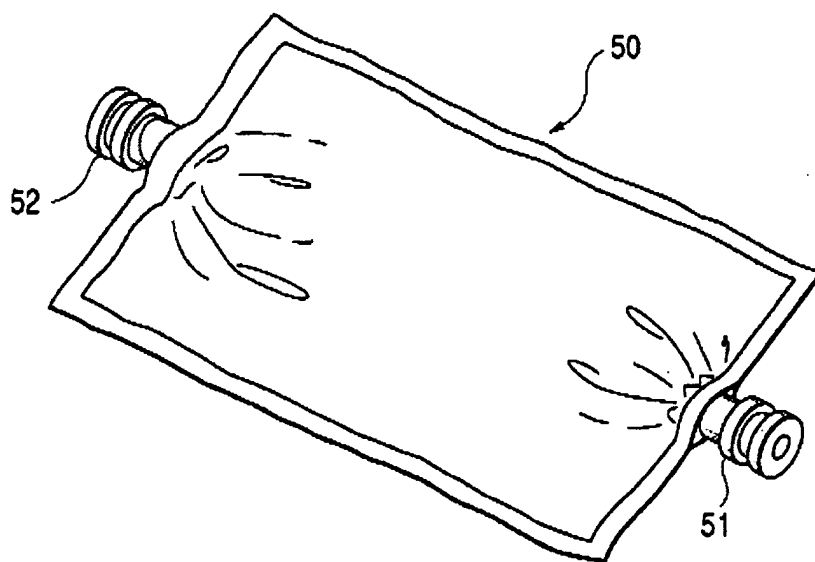


FIG. 5



k. As related to dependent **claim 17**, Mochizuki teaches a feed system for feeding a printing medium to a printing device (Mochizuki – Description, Column 2, Lines 59-67 and Figures 3, Reference #40, #41, #16, #51, #50 & #52, shown above), including a flexible reservoir, which is operatively connected to a working container, wherein the reservoir comprises a front surface and a rear surface made from a gas-impervious, metallized plastic film [i.e. aluminum laminated film], which are connected to one another along the periphery, a closable outlet opening with connecting means for coupling to the working container being provided in a peripheral part (Mochizuki – Description, Column 3, Lines 16-25 and Figure 4, Reference #40, Arrows, #40a, & #41, shown above), the working container comprises a flexible container made from a metallized plastic film, a first peripheral part of which is provided with an outlet opening with connecting means for coupling to a feed leading to a print head, and a second peripheral part of which is provided with an inlet opening with connecting means for coupling to the reservoir (Mochizuki – Description, Column 3, Line 54 – Column 4, Line 13 and Figures 3 and 5, Reference #50, #51, & #52, both shown above).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

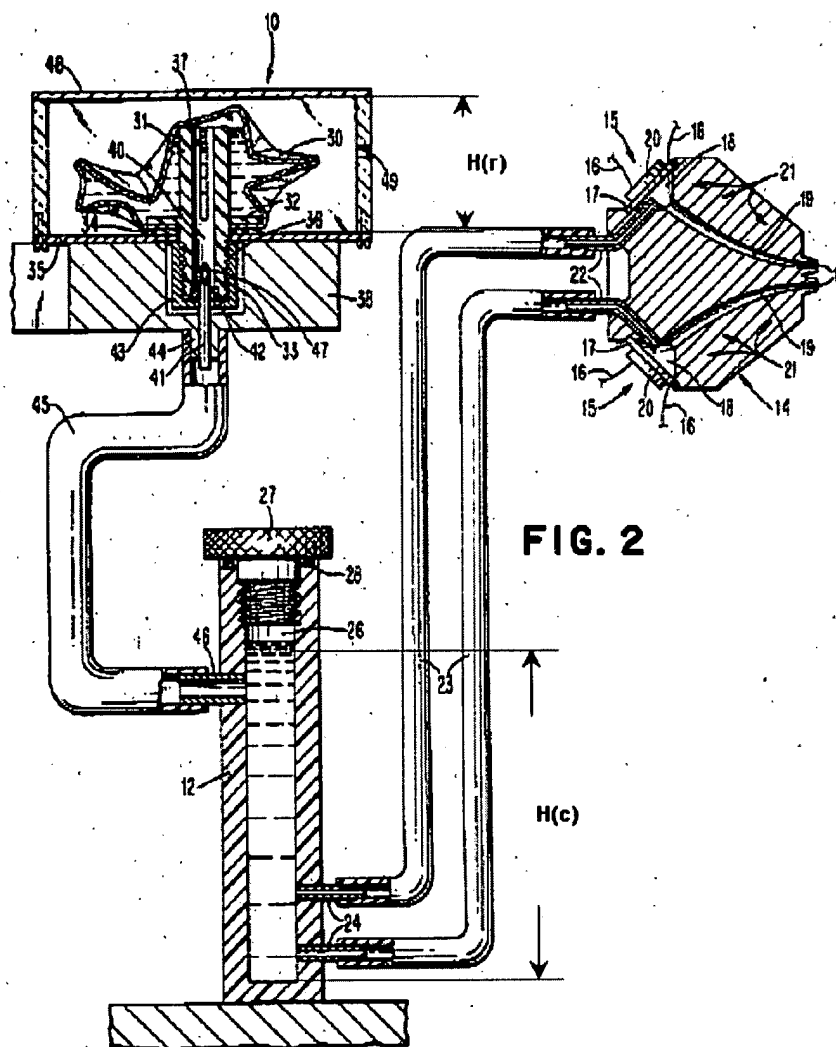
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. **Claims 2 & 9** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Mochizuki**, (US 6,267,474 B1) and further in view of **Hildenbrand et al.**, (US 3,708,798 A).

- a. As related to dependent **claim 2**, Mochizuki teaches the printing device of **claim 1**, for the reasons above and continues to teach various positions for the reservoir but **does not** specifically teach the reservoir above the working container. **However**, Hildenbrand et al. teaches an ink distribution system with a reservoir [i.e. expandable or collapsible ink bag] positioned at a height difference above the working container [i.e. manifold] (Hildenbrand et al. – Title; Abstract; Description, Column 3, Lines 19-41 and Figure 2, Reference #30 & 12, shown below).



b. As related to dependent **claim 9**, Mochizuki teaches the printing device of **claim 1**, for the reasons above and continues to teach the reservoir is a different size than the working container but **does not** specifically teach height dimension of the reservoir is smaller than the height dimension of the working container. **However**, Hildenbrand et al. teaches the reservoir has a height dimension and the working container has a height dimension, wherein the height dimension of the reservoir [i.e. $H(r)$], in the completely

filled state, is smaller than the height dimension of the working container [i.e. $H(c)$]
(Hildenbrand et al. Figure 2, Reference #10, #12, Arrows, $H(r)$, & $H(c)$, shown above).

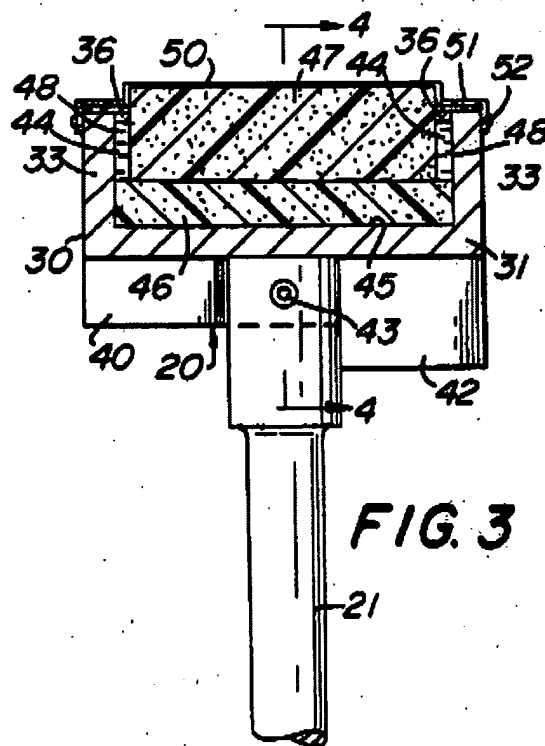
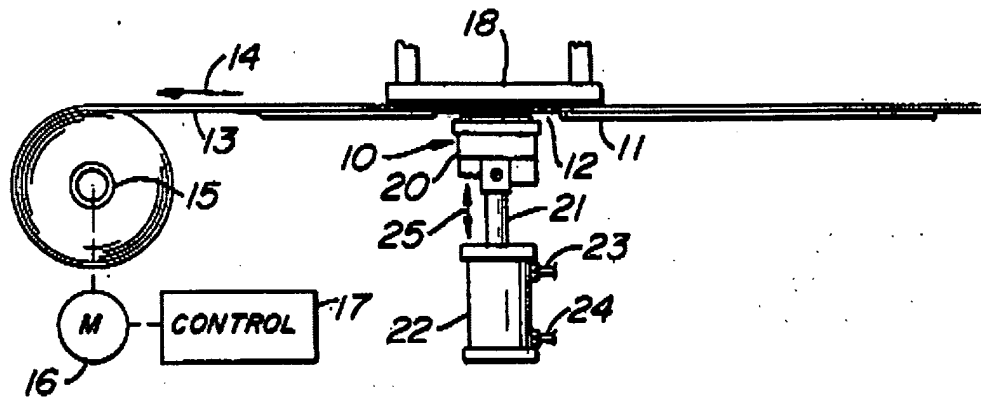
Given the same field of endeavor, specifically an ink supply system or ink distribution system, it is apparent that one of ordinary skill in the art at the time the invention was made would have been motivated to combine the ink supply system with the various containers and supplying means as taught by Mochizuki with the ink distribution system with container locations placed above and below and with different height dimensions as taught by Hildenbrand et al., in an effort to provide separate ink containers thereby preventing transmission of inappropriate waves and cross talk while replenishing ink supplies at a constant pressure (Hildenbrand et al. – Abstract; Summary, Column 1, Lines 44-45; and Description, Column 3, Lines 33-35).

8. **Claims 3-7** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Mochizuki**, (US 6,267,474 B1) and further in view of **Dreeben**, (US 4,441,422 A) and **Cole**, (US 2003/0071722 A1).

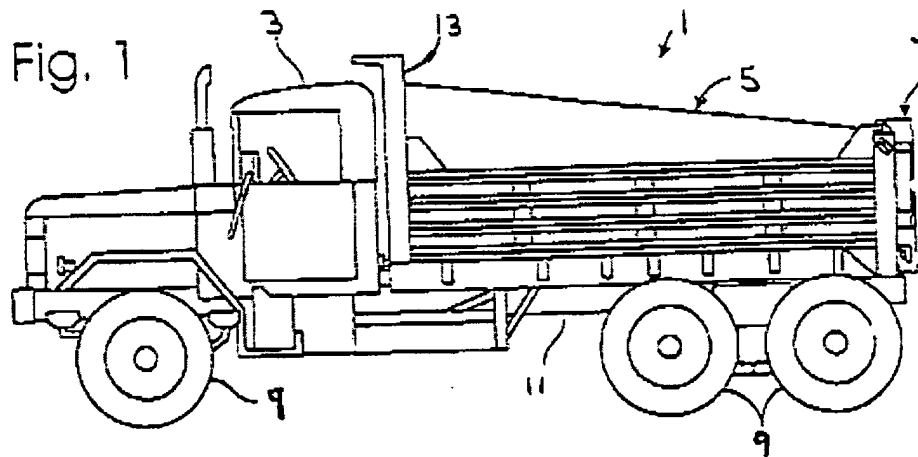
a. As related to dependent **claim 3**, Mochizuki teaches the printing device and reservoir of **claim 1**, for the reasons above and continues to teach the system is capable of stably supplying a substance. Mochizuki *does not* specifically teach a displacement means for moving the reservoir. *However*, Dreeben clearly teaches a system that supplies a substance, in this case ink, from a reservoir to a working container [i.e. printing pad] wherein a displacement means is provided for moving the reservoir upwards with respect to the working container (Dreeben – Abstract; Description,

Column3, Lines 10-15; Figure 1, Reference #21 & #25; and Figure 3, Reference #21, #46, & #47, both shown below).

FIG. 1

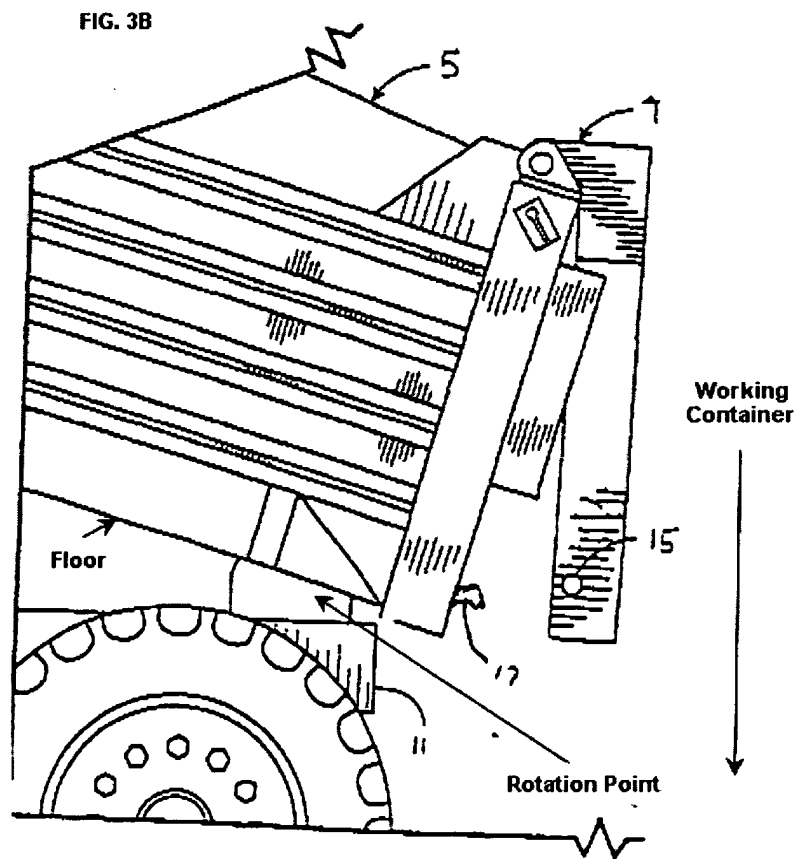


b. Continuing with **claim 3**, Cole also teaches a supplying system [i.e. dump truck] that supplies a substance from a reservoir [i.e. dump bed] to a working container [i.e. any device known in the art used to contain the substance (hopper, hole, etc.)] wherein a displacement means [i.e. hydraulic lift system] is provided for moving the reservoir upwards with respect to the working container thereby utilizing gravity as an additional source of energy to assist in movement of the substance (Cole – Detailed Description, Page 2, Paragraph 27 and Figure 1, Reference #5 shown below).

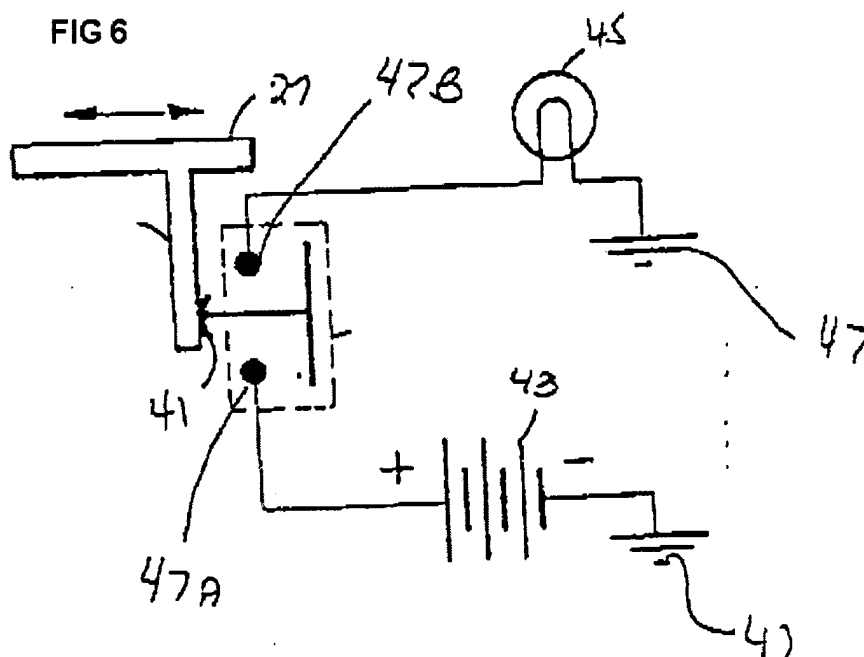


c. As related to further dependent **claim 4**, the combination of Mochizuki, Dreeben, and Cole teaches the printing device, reservoir and displacement means of **claim 3**, for the reasons above and continues to teach the displacement means comprise support means [i.e. frame], which can be tilted towards the working container, for supporting the reservoir (Cole – Detailed Description, Page 2, Paragraph 27 and Figure 1, Reference #11, shown above).

d. As related to further dependent **claim 5**, the combination of Mochizuki, Dreeben, and Cole teaches the printing device, reservoir and displacement means of **claim 4**, for the reasons above and continues to teach the support means includes a support plate [i.e. floor], which can rotate about a rotation point located in the vicinity of the end which faces the working container, and at the opposite end is connected to counter-pressure means [i.e. front wall], and which in the horizontal position bears against supporting means (Cole – Detailed Description, Page 2, Paragraph 27; Figure 3B, Reference Arrows, shown below and Figure 1, Reference #13, shown above).



e. As related to further dependent **claim 6**, the combination of Mochizuki, Dreeben, and Cole teaches the printing device, reservoir, displacement means and support plate of **claim 5**, for the reasons above and continues to teach a signaling means [i.e. lamp or buzzer] for remote detection of tilting of the support plate [i.e. disengagement of the catch and lug] (Cole – Detailed Description, Page 2, Paragraphs 15 & 30-32 and Figure 6, Reference #45, shown below).



f. As related to further dependent **claim 7**, the combination of Mochizuki, Dreeben, and Cole teaches the signaling means of **claim 6**, for the reasons above and continues to teach the signaling means are connected to a switch, which is energized in the event of the support plate tilting (Cole – Detailed Description, Page 2, Paragraph 32 and Figure 6, Reference #41, shown above).

Given the same field of endeavor, specifically a system that supplies a substance and utilizes gravity as an additional source of energy to assist in movement of the substance, which is a conventional way to supply ink from a reservoir to a working container, it is apparent that one of ordinary skill in the art at the time the invention was made would have been motivated to combine the printing device and ink storage reservoir as taught by Mochizuki with the ink supply system with the displacement means as taught by Dreeben, as well as the substance supply system with the displacement means and all further supplied components as taught by Cole, in an effort to use what is well known in the art of ink supply, that being gravity feed, while minimizing the disruption of the stability of the ink flow and provide for rapid repetitive printing without excessive depletion of ink (Dreeben – Summary, Column 1, Lines 30-33) as well as providing a device for signaling or alerting a system controller (Cole – Abstract).

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kaplinsky (US 4,959,667 A) teaches an ink delivery system with an ink reservoir and a working container for supplying ink to a print head. Seccombe et al. (US 5,650,811 A) teach an apparatus for providing ink to a printhead consisting of a reservoir placed in line with or above a working container. Erickson (US 5,751,321 A) teaches the conventional method and apparatus used to refill an ink jet printer and the use of gravity as an additional source of energy to assist in movement of a substance [i.e. ink]. Mitchell et al. (US 2002/0127066 A1) teach many things that are well known in the art of substance supply systems and displacement means used to tilt reservoirs upwards with respect to a working container and towards a working container. Ohashi et al. (US 2003/0052950 A1) teach an ink supply system including a sub-tank that can be tilted to ensure consistent flow of ink from the reservoir to the working container.

10. ***Examiner's Note:*** Examiner has cited particular Figures & Reference Numbers, Columns, Paragraphs and Line Numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in their entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the examiner.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John P. Zimmermann whose telephone number is 571-270-3049. The examiner can normally be reached on Monday - Thursday, 7:00am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Luu can be reached on 571-272-7663. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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